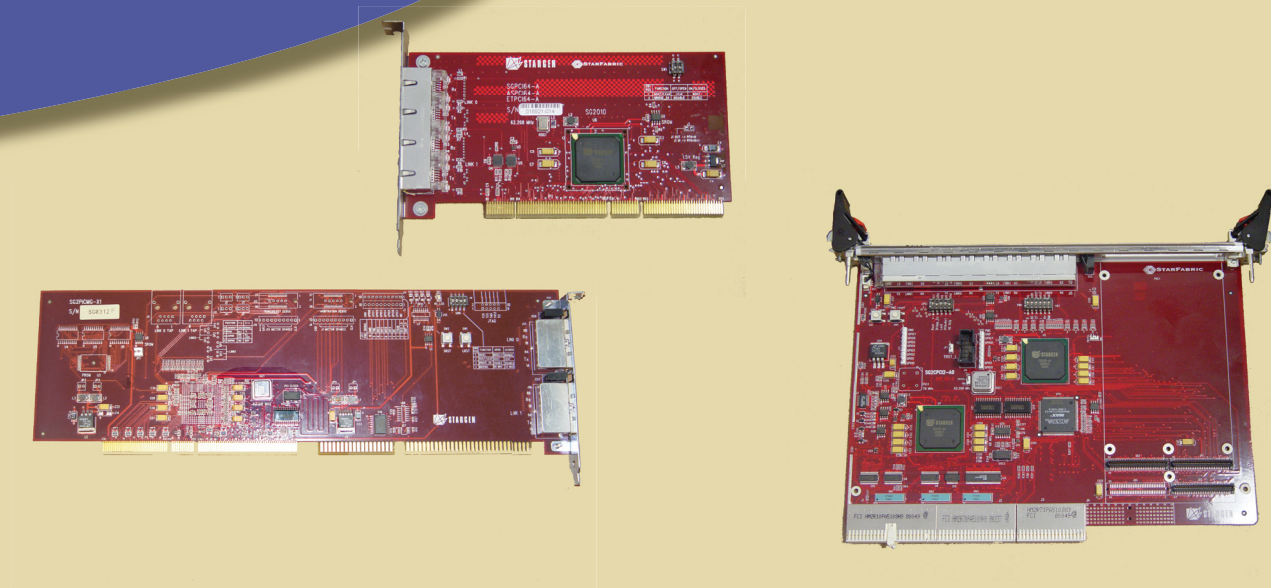# StarGen
SG2010 Product Evaluation Kit

StarGen offers three Product Evaluation Kits for the SG2010 PCI-StarFabric Bridge. StarFabric is a high speed serial switch fabric, which addresses the needs of engineers designing products for the communications, server, and embedded markets. These kits provide example implementations and design aids for building StarFabric based products. Designers are able to reducing time to market by prototyping systems using StarGen's evaluation boards. The product evaluation kits include a reference board, along with software binaries, sample source code, and documentation. These tools provide a robust environment for evaluating StarFabric technology.

StarGen's SG2010 evaluation boards support many StarFabric features. System designers are able to evaluate features such as Bridge and Gateway mode operation, legacy address routing, and classes of service. System topologies can be built and evaluated using these boards alone or in conjunction with the SG1010 StarFabric Switch evaluation boards. Topologies ranging from simple chassis to chassis connections to larger redundant fabrics with high availability features can be demonstrated and analyzed for performance and functionality.

Three different form factors are offered to enable a variety of different designs. SG2010 product evaluation kits include PCI, 6U CompactPCI and PICMG form factor boards. The evaluation boards adhere to current PCI, PICMG, and CompactPCI standards. Each board comes with a 64-bit PCI interface and support 66 MHz operation. Two StarFabric links are included with each board supporting 2.5 Gbps. These links can be connected with standard RJ45 connectors and CAT5 cables for a distance up to 10 Meters.

The SG2010 Product Evaluation Kit also comes with a full set of software tools to evaluate StarFabric technology. These software tools include the binaries for Windows, Linux, and VxWorks bus drivers. The drivers were implemented using an ANSII compliant layered design that is portable to different processor architectures. By using the bus drivers and supporting sample source code, developers can manage fabric components and quickly start evaluating the capabilities of the hardware. In addition to the drivers and sample source code, the kit includes both a DOS (PVX) and Windows/Linux (StarView) utility for aiding designers in evaluating StarFabric.

Key Features

Form Factors
- Compact PCI
- PCI
- PICMG

Supported Standards
- PCI 2.2
- PICMG 1.0
- CompactPCI 3.0

Diagnostic Features
- JTAG support
- Serial Link Status LEDs
- Differential signaling probe points

Operating Modes
- PCI support up to 64 bit / 66 MHz
- Legacy PCI addressing mode
- StarFabric Bridge and Gateway mode
- Gateway only mode

Additional Features
- 64K SROM
- Strapping pins and switches to enable features
- CompactPCI Hot Swap capability
- CompactPCI PMC site

Evaluation Software Features
- Windows (XP and 2000), VXworks, and Linux Bus Driver Binaries
- StarView and PVX evaluation tools

Documentation
- Evaluation Board User Guides
- Software and Hardware Application notes
- Schematics

Product Matrix

		PCI	PICMG	CPCI
Diagnostic features	JTAG Support	x	x	x
	Logic Analyzer connectors	x	x	x
	Serial link status LEDs	x	x	x
Operating modes	PCI support up to 64 bit 66Mhz	x		
	Legacy PCI-to-PCI bridge mode	x	x	x
	StarFabric Path-routed Gateway mode	x	x	x
	Mixed Gateway/Bridge mode	x	x	x
Hardware features	Hot swap capability			x
	GPIO enabled stake pins	x	x	x
	64K SROM	x	x	x
	PMC Carrier			x
Power requirements	5.0 Volt	x	x	
	3.3 Volt	x	x	x